



**STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.**

ATTORNEYS AT LAW

1100 NEW YORK AVENUE, N.W., SUITE 600  
WASHINGTON, D.C. 20005-3934

www.skgf.com

PHONE: (202) 371-2600 FACSIMILE: (202) 371-2540



ROBERT GREENE STERNE  
EDWARD J. KESSLER  
JORGE A. GOLDSTEIN  
SAMUEL L. FOX  
DAVID K.S. CORNWELL  
ROBERT W. ESMOND  
TRACY-GENE G. DURKIN  
MICHELE A. CIMBALA  
MICHAEL B. RAY  
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ROBERT C. MILLONIG  
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DONALD R. MCPHAIL  
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CRYSTAL D. SAYLES\*  
EDWARD W. YEE  
ALBERT L. FERRO\*  
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TERESA U. MEDLER

JEFFREY S. WEAVER  
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KENDRICK P. PATTERSON  
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GRANT E. REED  
VINCENT L. CAPUANO  
JOHN A. HARROUN\*  
MATTHEW M. CATLETT\*  
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W. BRIAN EDGE\*

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BRIAN J. DEL BUONO\*\*  
ANDREA J. KAMAGE\*\*  
NANCY J. LEITH\*\*  
TARJA H. NAUKKARINEN\*\*

\*BAR OTHER THAN D.C.  
\*\*REGISTERED PATENT AGENTS

June 9, 2000

WRITER'S DIRECT NUMBER:  
(202) 371-2674

INTERNET ADDRESS:  
MLEE@SKGF.COM

Commissioner for Patents  
Washington, D.C. 20231

**Box Patent Application**

Re: U.S. Non-Provisional Utility Patent Application under 37 C.F.R. § 1.53(b)  
Appl. No. To be assigned; Filed: June 9, 2000  
For: **Phase Shifting Applications of Universal Frequency Translation**  
Inventors: Robert T. Short, Jonathan S. Jensen, Martin R. Johnson, Jamison  
L. Young, David S. Sorrells, Michael J. Bultman, Robert W. Cook,  
Richard C. Looke and Charley D. Moses  
Our Ref: 1744.0710005

Sir:

The following documents are forwarded herewith for appropriate action by the U.S.  
Patent and Trademark Office:

1. USPTO Utility Patent Application Transmittal Form PTO/SB/05;
2. U.S. Utility Patent Application entitled:

**Phase Shifting Applications of Universal Frequency Translation**

and naming as inventors:

**Robert T. Short, Jonathan S. Jensen, Martin R. Johnson, Jamison L. Young,  
David S. Sorrells, Michael J. Bultman, Robert W. Cook, Richard C. Looke  
and Charley D. Moses**

the application comprising:

00590955-060900

Commissioner for Patents

June 9, 2000

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- a. specification containing:
- i. 136 pages of description prior to the claims;
  - ii. 9 pages of claims (33 claims);
  - iii. a one (1) page abstract;
- b. One-hundred and seventy one (171) sheets of drawings: (Figures 1A-D, 2A, 2B, 3-5, 6A-I, 7-14, 15A-F, 16-19, 20A, 20A1, 20B-F, 21, 22A-F, 23A-F, 24A-J, 25A-K, 26A, 26B, 27A-F, 28A, 28B, 29, 30 A-D, 31A-C, 32A-C, 33A-D, 34A, 34B, 35A-C, 36-43, 44A, 44B, 45A, 45B, 46-48, 49A, 49B, 50A, 50B, 51A, 51B, 52-56, 57A-C, 58A-C, 59, 60, 61A, 61B, 62, 63A, 63B, 64, 65A, 65B, 66A, 66B, 67A-D, 68A-C, 69-77, 78A-D, 79, 80A, 80B, 81-86, 87A, 87B, 88-89, 90A, 90B, 91A-D, 92A-D, 93A-E, 94-95, 96A-C, 97, 98A, 98B, 99A-C, 100-106, 107A-C, 108-110, 111A-F, 112-115, 116A, 116B, 117A, 117B, 118A-F, and 119);
3. 37 C.F.R. § 1.136(a)(3) Authorization to Treat a Reply As Incorporating An Extension of Time (in duplicate); and
4. Two (2) return postcards.

It is respectfully requested that, of the two attached postcards, one be stamped with the filing date of these documents and returned to our courier, and the other, prepaid postcard, be stamped with the filing date and unofficial application number and returned as soon as possible.

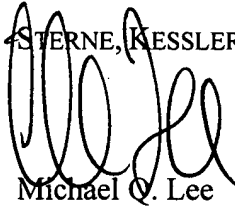
***This application claims the benefit of the following U.S. Provisional Application No. 60/167,704; filed on November 24, 1999; U.S. Provisional Application No. 60/170,767, filed on December 15, 1999; U.S. Provisional Application No. 60/171,584, filed on December 23, 1999; U.S. Provisional Application No. 60/177,380, filed on January 24, 2000; and U.S. Provisional Application No. to be assigned, filed June 2, 2000, Attorney Docket No. 1744.0710004.***

Commissioner for Patents  
June 9, 2000  
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**This patent application is being submitted under 37 C.F.R. § 1.53(b) without Declaration and without filing fee.**

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.



Michael Q. Lee  
Attorney for Applicants  
Registration No. 35,239

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PTO/SB/05 (2/98)

Approved for use through 09/30/2000. OMB 0651-0032  
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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### UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR § 1.53(b))

Attorney Docket No.		1744.0710005
First Inventor or Application Identifier		Robert T. SHORT
Title	Phase Shifting Applications of Universal Frequency Translation	
Express Mail Label No.		

### APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

ADDRESS TO:

Assistant Commissioner for Patents  
Box Patent Application  
Washington, DC 20231

1. ☐ \* Fee Transmittal Form (e.g., PTO/SB/17)  
(Submit an original, and a duplicate for fee processing)
2. ☒ Specification [Total Pages 146 ]  
(preferred arrangement set forth below)
- Descriptive title of the Invention
  - Cross References to Related Applications
  - Background of the Invention
  - Brief Summary of the Invention
  - Brief Description of the Drawings (if filed)
  - Detailed Description
  - Claim(s)
  - Abstract of the Disclosure

6. ☐ Microfiche Computer Program (Appendix)
7. Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)
- a. ☐ Computer Readable Copy
  - b. ☐ Paper Copy (identical to computer copy)
  - c. ☐ Statement verifying identity of above copies

3. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets 171 ]

- ☐ Oath or Declaration [Total Pages        ]

- a. ☐ Newly executed (original or copy)
- b. ☐ Copy from a prior application (37 CFR 1.63(d)) (for continuation/divisional with Box 17 completed)  
[Note Box 5 below]

- i. ☐ **DELETION OF INVENTOR(S)**  
Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR §§ 1.63(d)(2) and 1.33(b).

- ☐ Incorporation By Reference (useable if Box 4b is checked)  
The entire disclosure of the prior application, from which a copy of the oath declaration is supplied under Box 4b, is considered as being part of the disclosure of the accompanying application and is hereby incorporated by reference therein.

### ACCOMPANYING APPLICATION PARTS

8. ☐ Assignment Papers (cover sheet & document(s))
9. ☐ 37 CFR 3.73(b) Statement (when there is an assignee) ☐ Power of Attorney
10. ☐ English Translation Document (if applicable)
11. ☐ Information Disclosure Statement (IDS)/PTO-1449 ☐ Copies of IDS Citations
12. ☐ Preliminary Amendment
13. ☒ Return Receipt Postcard (MPEP 503)  
(Should be specifically itemized)
14. ☐ \*Small Entity Statement(s) (PTO/SB/09-12) ☐ Statement filed in prior application, Status still proper and desired
15. ☐ Certified Copy of Priority Document(s) (if foreign priority is claimed)
16. ☒ Other: 37 C.F.R. § 1.136(a)(3) Authorization
- ☐ Other:
- \*NOTE FOR ITEMS 1 & 14: IN ORDER TO BE ENTITLED TO PAY SMALL ENTITY FEES, A SMALL ENTITY STATEMENT IS REQUIRED (37 C.F.R. § 1.27). EXCEPT IF ONE FILED IN A PRIOR APPLICATION IS RELIED UPON (37 C.F.R. § 1.28).

17. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment:

☐ Continuation ☐ Divisional ☐ Continuation-in-Part (CIP) of prior application No:        /       

Prior application information: Examiner                      Group/Art Unit:                     

### 18. CORRESPONDENCE ADDRESS

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or ☒ Correspondence  
address below

NAME	STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.				
	Attorneys at Law				
ADDRESS	Suite 600, 1100 New York Avenue, N.W.				
CITY	Washington	STATE	DC	ZIP CODE	20005-3934
COUNTRY	USA	TELEPHONE	(202) 371-2600	FAX	(202) 371-2540

NAME (Print/Type)	Michael C. Lee	Registration No. (Attorney/Agent)	35,239
SIGNATURE		Date	6/19/2000

Burden Hour Statement: this form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

SHORT *et al.*

Appl. No. To be assigned

Filed: June 9, 2000

For: **Phase Shifting Applications of  
Universal Frequency Translation**

Art Unit: To be assigned

Examiner: To be assigned

Atty. Docket: 1744.0710005



**Authorization To Treat A Reply As Incorporating An Extension Of Time  
Under 37 C.F.R. § 1.136(a)(3)**

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

The U.S. Patent and Trademark Office is hereby authorized to treat any concurrent or future reply that requires a petition for an extension of time under this paragraph for its timely submission, as incorporating a petition for extension of time for the appropriate length of time. The U.S. Patent and Trademark Office is hereby authorized to charge all required extension of time fees to our Deposit Account No. 19-0036, if such fees are not otherwise provided for in such reply. A duplicate copy of this authorization is enclosed.

Respectfully submitted,

STEARNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

Michael Q. Lee  
Attorney for Applicants  
Registration No. 35,239

Date: 6/9/2000  
1100 New York Avenue, N.W.  
Suite 600  
Washington, D.C. 20005-3934  
(202) 371-2600